THE HORTICULTURIST
EDITED BY
HENRY T. WILLIAMS.
E. SEARS, SC.

VOL. 27. NOVEMBER, 1872. NO. 317.

Those Big Pears—Notes of Editorial Travel.

PEAR growing at Norfolk, Va., has assumed some aspects which are peculiar in fruit culture. Most of the pears now grown are on large farms, rather than places of small extent. Several farmers have as many as fifty acres devoted entirely to pears, and we have even heard of one case where an entire farm of 160 acres had been planted. Near Norfolk, Mr. John B. Whitehead has an orchard of 5,200 trees. Mrs. Wier has nearly the same, and Mr. G. F. B. Leighton, 7,000 trees. We visited Mr. Leighton's place recently, on our return from Virginia, and witnessed the identical spot and trees, where were grown "*those big pears*" which gave Mr. Leighton such a name and fame at Richmond, and since then at Philadelphia and Boston. There is no especial secret or extraordinary means used to produce them. One tree of the Duchesse, growing upon a heavy clay soil, was selected, four years old from planting. All the pears on the tree were thinned but three, and these were the entire crop of the tree. They weighed respectively as follows: *two pears* 30½ *ounces each*, and one pear 24½ *ounces*. Besides the natural fertility of the soil, Mr. Leighton gathers wood-marl and muck and composts it with lime, and spreads around his trees. Now he is composting bones and potash and ashes together, for the same purpose, as a fertilizer for the trees. It is scarcely necessary to say that Mr. Leighton's principal variety is the Duchesse, which forms, perhaps, three-fourths of his entire stock of trees. They are of various ages, from three to five years planted, and most of them were in bearing at the time of our visit. Trees at five years of age bore an average of a bushel and a-half a piece, and very many of them two bushels; trees of three and four years, a basket to a bushel.

Most of these pears were sent to New York, and realized $7 to $9 per bushel. Last year one single bushel was sold, as a curiosity, to a Broadway dealer, who paid $12 for it, and on counting them there were found to be but forty-eight pears, or at the rate of twenty-five cents per pear. They were resold again for fifty cents a piece.

A DINNER TABLE, DECORATED WITH FRUIT AND FLOWERS.

None of Mr. Leighton's pears have sold, at any time, for less than $4 per bushel, and most of the time have averaged over $5 to $7.

The pears are all very large, fully averaging over half a pound each through an entire shipment; and, as care is taken to have no poor specimens, his brand is counted a superior one in the market. Next to the Duchesse is the Bartlett, all of his trees being thrifty and very productive. His shipments to New York brought him $11 per bushel. Each tree, four to five years old, averaging two peach baskets.

We noticed an experiment on his place with a curious fertilizer, which Mr. Leighton is using with great success—*the black pea.* This is sown all over the ground, between the trees, and when bean pods are nearly ripe, the plow is put in and all are plowed under. It has proved to be a splendid fertilizer. Its leaves seem to gather ammonia from the atmosphere, and its roots, running deep into the subsoil, gather nourishment usually out of the reach of other crops; and thus, bringing new fertilizing material into the surface soil, it becomes an immense benefit.

Among other pears (for sixty varieties are being tested), Mr. Leighton gives especial favor to the

Clapp's Favorite.—This is really one of the handsomest trees on the place; leaves quite healthy; branches stout and vigorous. The pear is exceedingly pretty; very early, fully ten days before the Bartlett, good size, handsome shape, red cheek, and more uniform in outline and size than the Bartlett. He thinks it the most profitable early pear we have. Has no trouble with rotting, for the pear is picked while yet hard, and before ripe, and permitted to color up in the house or on the way to market. The standard trees are very much slower in coming into bearing than the dwarfs, which begin at a very early date, and are quite productive. He says it is the handsomest pear he ever saw. It is a singular criticism on the tastes of New York buyers, that when sent to New York it brought less than half the price of the Bartlett, or $5 for former per bushel against $11 for the latter. He thinks it little use to plant any market pear ripening earlier than this.

The Souvenir du Congres is a very fine grower; as good in this respect as the Bartlett, also ten days earlier; has a handsome carmine cheek, and very large size. Trees not yet fruited enough to determine their productiveness, but has hopes that it will prove as fine an early summer pear as the *Clapp's Favorite.*

The Mount Vernon is represented in one handsome tree, three years old; very thrifty; hardy; perfects its wood well; holds its leaves in hottest sun.

Beurre Superfin, as a dwarf, is quite productive, and has a sprightly champagne flavor with spicy acid taste, which, together with its handsome form, will make it valuable. He enjoys it, as a pear to eat, as more refreshing than any pear on the place. Ripens at same time as the Bartlett.

Beurre d'Anjou is moderately productive; three trees, five years old, bore but 1½ bushels; considered not more profitable than the Duchesse.

Osband's Summer produces very well; is ten days ahead of the Bartlett; not prepossessing in appearance, nor better than the Clapp's Favorite or Doyenne d'Été.

Bloodgood—Thrifty grower; only second rate in productiveness; flavor sweet and excellent, but fruit is hard and does not ripen well.

Beurre Clairgeau—Handsome color; pears hang on well with him; quality only medium; would not risk it as a market pear over some others.

Doyenne d'Été—Has shipped them as early as the 24th of June. It reddens up very handsomely; quality fine; fruit small, about the size of a large walnut with green shell on.

Nouveau Porteau—Not productive, although tree is a vigorous grower.

Beurre Hardy—Pears dried upon the tree; loses its leaves early; condemned.

Lawrence—Very handsome grower; hardy; thrifty; healthy; looks best of the late varieties.

One principle is stated by Mr. Leighton with distinctness: "That it is no use to grow a pear of one variety, if you can put in its place a tree of any other variety which will yield more money." So he is constantly clearing out new varieties which do not do well, and we notice that the duplicates he puts in their place are Bartlett and Duchesse.

White Grapes.

BY S. J. PARKER, M. D.

NO grape would meet with a more favorable reception than a large, magnificent, delicious, white American grape. Among our native white grapes there are those of hardiness, but the qualities of flavor and size are sadly wanting. Let me kindly yet plainly review a few of the American white grapes now before the public.

One of the oldest is the *Maxatawny*. This has been steadily improving ever since it was introduced to the attention of grape growers. When I first saw it, on my own vines, it scarcely was edible, October 25th, and was insipid and inferior at that. These vines, grown from buds of the original vine, now ripen their fruit by the middle of September. Grafted on Isabella, Concord or Catawba old stocks, this grape becomes here as large as Isabellas, and load themselves fully, so as to appear well on the trellis. Yet I apprehend that, until reseeded and long cultivated, it will not be fully popular.

Cuyahoga—This is a small grape in a beautiful compact bunch, as usually grown. It also enlarges and improves in size the longer it is cultivated. On certain very dry and yet rich sites, I have seen it quite sweet and in passable flavor. Yet, if I am correct for the majority of situations, where other grapes are in full sweetness and flavor, this beautiful grape is as insipid and flavorless as any grape well can be. Certain am I that it makes no progress in public esteem, compared with the length of time it has been on sale and in cultivation, because of these undesirable qualities.

Lydia—This is as hardy as the Concord, its parent. It, at this place, bears well, and I cannot condemn it; yet it is small and often fails to ripen well, or is liable to the accidents of every season, to a degree that its parent vine is not. Some years I feel like praising it highly; such years as this it needs to be dispraised severely.

Croton—Scores of letter writers write to me of late: "Is the Croton what it pretends to be?" I can but reply that, as far as I have seen it, it appears to be a very desirable grape. It is medium in size, in a fair, not largest bunch, and desirable in appearance. Its flavor is, as far as I have seen it, quite agreeable, but I cannot say that I have seen enough to form an ultimate opinion. The wood has, with me, a large pith, and was injured by the unexampled severity of last winter. I wish I knew more of it, and could tell exactly what it is.

And let me say, there are several of David Thompson's seedlings which are white. Could they be grown as, in exceptionably favorable years, I have seen them at Green Island, near Troy, a mile off, then no one would want better white grapes than many of these. And while I do not condemn them, yet I say try them carefully. At Ithaca, so far, they do not mildew or rot, but are late.

I now name *Rebecca*. This is an old grape. The best vineyard of this grape I ever saw was that of the late Dr. Kellogg, of this place. It was on a dry knoll, and proved that if this vine is planted on wire trellis, six feet apart and rows eight feet from each other, it will cover a trellis three feet high, and near the ground bear beautiful yellowish white grapes, in small, irregular bunches, and can be sold at a profit. It is no use to attempt to grow it on a large trellis. It is never sweet or high in flavor. On damp, rich soils here it is insipid, and never fully ripe.

Let me now say that I have a seedling which is now, September 15th, quite ripe. It is perfectly hardy, and this is the second year of its bearing. Last year it was ripe the last of August. This is a damp, irregular year, ill suited to all grapes, and all are late with us. The berry is clear yellowish white, bunch medium, smaller, so far, than I could wish. Let no one write to me for it, as it is not for sale, or to be given away, at present. If it proves excellent, I shall ask at least five thousand dollars for the exclusive right to it. If it proves no better than the Cuyahoga, Lydia and Rebecca, I shall, in a few years, give it to all who wish it. It, so far, has proved sweet, early and fine in flavor.

Several other grapes of less value than these might be named, but the time to describe them would be lost. On the whole, it is questionable whether the satisfactory white American grape has yet been seeded; certainly no one is, beyond all doubt, clearly before grape growers. My best hopes are for the Croton and my own grape. For the southern, western and trans-Rocky Mountain States, the grapes of David Thompson, will be favorites; for, as my correspondent, W. H. Stith, Esq., has shown, foreign grapes, while the vines are youthful, will ripen quite well at Richmond, Va., and certainly hybrids ought to do better there and further south than unmixed foreign pollen.

Mr. W. H. Stith, of Richmond, Va., has, this year, ripened the delicious Muscat Hamburg out of doors.

Concords ripen best in Southern Maryland and Virginia of any region of the Atlantic coast, from which we have seen them. There is no denying the soft pulp, the delicious sweetness and the earliness (Aug. 15th) of this region for the Concord.

Northern Grown Trees at the South.

IN one of her letters from Florida, published in the *Christian Union*, Mrs. H. B. Stowe states that a peach orchard on her estate does not "put forth" at the same time other peach orchards do in that vicinity, but remains dormant until the time arrives for peach trees to start at the North, and expresses the opinion that the cause is, that her trees were grown at the North.

I think Mrs. Stowe, on investigation, will find some other cause for the late starting of her orchard. Perhaps the trees have been set very deep in wet soil. It does not seem possible that a peach tree in a healthy condition, set in suitable soil, could resist the influence of the same degree of heat at the South, which would cause them to put forth at the North. Peach trees have no *set* time at the North for starting; but often vary from a week to ten days in their time of blossoming, according to the season; and in one instance, an old settler of Northern Ohio informed me, peach trees were in bloom in Portage county the 22d of March, which is a month before the usual time; proving that it is the weather and not the latitude in which the trees are propagated, that regulates the time for the expansion of leaves and blossoms. If this were not so, peach trees would not bloom in winter in Northern hot-houses.

St. Joseph, Mich. J. A. D.

Those New Grapes.

THE Croton, about which there has been so much of a stir made, I think will prove to be a valuable addition to our already long list of grapes suitable for general culture, if its fruit proves to be as good as its healthy, vigorous growth leads us to suppose it to be. It is, evidently, as hardy as almost any other variety we have, and bids fair to hold a prominent position in large plantations of this fruit. It is a white in color and of good quality. Although the first planted vines, now in their third year, did not produce as much wood as we think they should, judging from the previous year, yet the younger vines seem to have taken upon themselves the task of supplying the deficiency, having made a splendid growth. We yet wish a year or so to enable us to give a just verdict of the merits of the Croton.

The Senasqua, as regards growth, has proved very much like the first named variety, and, being of the same age, is not yet old enough to say whether it will prove a good market sort, although, from present appearances, we should say it may.

Chesapeake City, Md. POMONA.

A House Pet.

NO prettier small pet can be had than the common water bug, or *Dytiscus*. They seem intent on drowning themselves, and their motions in the water are ever amusing. A goblet with one in can be kept amid house plants, and the bug in it is satisfied to live in the water, on the underside of a chip of wood or piece of floating bark. If taken in the fall and fed a little animal or insect food, they are pets all winter long, and very entertaining to those who never saw bugs which live under water. I have two now; one an inch long and very strong, the other small and less strong. They can be found in springs and cool water; and sometimes in damp earth, sawdust.

S. J. PARKER, M. D.

The Hersteine and Saunders Raspberries—Their Hardihood.

BY L. F. ALLEN.

A FEW months ago I saw a notice in one of the papers, from one who had tried them, that these fruits were not hardy, having been killed by the inclemency of the past winter, and thus detracting largely from their value as an economical fruit, either for domestic use, or for market.

I read the article in question last spring, before the buds had begun to swell, and while in their winter condition. Having planted a half dozen of each of the varieties the year before, the most of which took root and grew well during the season—although a remarkably dry one—I immediately examined the canes, which had been left bare and unprotected with any kind of covering, in the same row and on a line with a plantation of the Clark's, which had also received no winter protection. On cutting into several of the canes of each variety, I found them all bright and lively, even to the extreme tips of not only the main stems, but the lateral branches. I had left the Hersteines and Saunders open, for the purpose of proving their hardihood, as I had previously done with the Clark, having little fancy to grow small fruits (save, perhaps, the strawberry) which will not bear our winters without artificial covering. My latitude is nearly 43 deg. north, and we sometimes, although seldom, have the mercury down to 10 deg. below zero, as it was two or three times during the last winter.

All the plants of the three varieties alike threw out vigorous shoots, grew well, and bore good crops the present season, besides pushing up abundant suckers for bearing another year. The Saunders appears to be almost as prolific in *sucker* bearing as its parent, the Allen, which it much resembles, only I think it rather an improvement in size, of equally good flavor, and I hope will prove a more prolific bearer, without another variety by its side to fertilize it. The Hersteine appears to be hardly so vigorous a grower as the Saunders, nor so prolific in pushing up young canes; but its fruit is delicious, large, and abundant. I consider them both as among the *very best* raspberries yet introduced.

Nor, in praising these, would I overlook the Clark. Its vigorous growth, hardihood, abundant bearing, and choice flavor, commend it to every one who wishes to produce a first class raspberry for family use. As a *market* fruit, *for long carriage*, I doubt whether either of these varieties will succeed, *on a large scale*. They are so delicate in structure, like all other fruits of superlative quality, that they suffer from close packing and long exposure after picking. In fact, it is virtue enough in these choice fruits, when they yield so much luxury to the private tables of their growers, that they be spared the profanity of transportation to outside markets. Let the hardier and less delicious varieties serve these purposes.

As all varieties of fruit differ somewhat in their success, or the want of it, in the kind of soil they occupy, I remark that mine is a rich, clayey loam, in common fertility only, as for usual garden purposes.

Buffalo, August, 1872.

Our Native Ornamental Trees.

BY SUEL FOSTER.

IN reading, in the September number of the HORTICULTURIST, the list of *ornamental flowering shrubs*, it reminded me of a few small native trees I have, which I value highly.

First is the June Berry, or Service tree, native both east and west; it comes into bloom early, as early as the buds of deciduous trees begin to open, and is as white as a tree covered with flakes of damp snow. Then its form of growth is perfect, neat and clean; its leaves delicate and beautiful; and in autumn they turn deep, elegant brown, almost brilliant red. Truly beautiful, both early and late, and all summer.

The Red Bud (Judas Tree) is like it in many respects, with a great profusion of pink flowers sticking out all along the limbs, looking as though some sweet little frolicsome girl had pinned them on for ornament. Its blooming is early spring, following soon after the Service. Its foliage is very perfect and beautiful. I doubt whether it is a native of our eastern States, but it grows everywhere, up and down the streams of the west, south of 42°.

I find two varieties of Catalpa. The common variety has proved too tender for our severe winters of this prairie country; but I have another and far better variety, every way, of the Catalpa, to all appearance as hardy as an oak. It blooms earlier than the common, larger flowers, and a more profuse bloomer. Early in June it opens its long stems of large, elegant and fragrant flowers, filling its delicate and luxuriant green leaves in its more symmetrical branching top. This variety of the Catalpa may be common in many places. It has stood upon my place some eighteen years; was procured among other articles of Mr. Lipsey, of Indiana. I had never seen any seeds upon my four trees until last year, when two of them had seed-pods. I gathered the seeds carefully, and distributed them among some twenty of my horticultural friends in Illinois and Iowa. I planted a few and raised about twenty-five plants. Who can tell us more about this better variety of Catalpa?

The Tulip Tree (New York, White Wood; Indiana, Yellow Poplar) is a beautiful tree, and its flowers, though not showy, are beautiful.

Many years ago, whilst traveling up and down the Mississippi river, I saw up in the trees a vine with gay orange flowers. Yankee-like, I said to my friend, "What vine is that with those beautiful flowers?" "Why, that's the Creeping Ginny." I would have given my new hat for a plant of the Creeping Ginny to set in my garden in Iowa. About sixteen years ago my friend, J. P. Walton, told me that the Virginia Creeper grew wild on Muskatine Island, near his brother's, not ten miles from here, and he would bring me up any quantity of them. So I got our native Bignonia and set them by the side of my big oaks and hickories, where they climbed and soon commenced blooming, and have not failed to strew my path with their gaudy trumpet flowers annually, from the first of July to September.

Fern Talk.

(Continued from *Oneida Circular.*)

THE Wood Ferns (and there is nearly a dozen of them) are not more peculiar to the forest than are the Spleenworts and the Maiden-Hair, but being evergreen they attract the attention in spring and winter, and are felt to be far more characteristic. Their glory is in the early spring. The sugar-maker sees them at the foot of the trees and near the logs where the sun has melted away the snow. When the snows are all gone and the Adder's-Tongue comes pricking up through the mat of brown leaves, the woods get a touch of gaiety from the ferns which lie bent over stones and crumpled down into holes and spread out on north-side banks and in deep ravines. They are the tokens of eternal summer—the symbols of her everlasting possession. The woodsman can't lose his way at this time o' year if he only stops to see where the ferns lie thickest.

When I come to look for a Rock Fern, I see a dozen quaint little figures start up, each one of which lays a claim to the rocks; but when they come to take their seats, one goes into the gallery, another into the pit, and a third into the private boxes; some take the wall, some keep in the shade, while others seek for the strongest glare of light. They are all weazen-faced little sprites, and have a mighty charm. The Woodsia is a small woolly fern which delights in exposed rocks. The Walking-Leaf likes the top of a rough limestone, where its small evergreen fronds lie flat on the rich plats of moss, and, protracted into long runners, propagate themselves by offsets as do the strawberries. The polypody (*Polypodium vulgare*) is generally found on the north side of high rocks. The top of a cliff is one of its favorite seats; growing there in a thick mat, it gives the stone an air of shrewdness like a bushy eye-brow. When the delicate Harebell is added and hangs its pretty flowers adown the cliff, you have one of those antitheses in which nature delights. You think of those sprigs of sentiment which she sometimes puts into the hearts of stern and useful men—soldiers, theologians and railway-contractors. The Bladder Fern (*Cystopteris bulbifera*) and the Bliff Brake (*Pellæa atropurpurea*) are the real climbers. They are never more at home than when scaling a wall of limestone. They root underneath the jutting points like eaves-droppers nesting under a cornice; they spring up in all the crannies, and, thrusting their leaves out to the light, they have the air of a bank-swallow peeping from his hole.

There is but one fern growing on trees, and that is the *polypodium incanum*, a sort of little brother to our old Polypody.

Besides the ferns I have mentioned, there are others which grow chiefly in the hearts of botanists. These are the ferns marked "rare" and "not common." Though you may never see them you believe in them as you do in your own genius; you look for them and wait for them as we do for a wind to fill our sails and bear us on to strange harbors. Growing, as they do, a few in a place, and perhaps a hundred miles from any others of their kind, the thought of them affects you like the rarity of high gifts, and you are fearful lest they have to go down in the struggle for existence. They are few and hard to find, but all the more potent, as if to teach us

to look beyond what our eyes can see. They raise more questions than a hundred scientists can answer.

One of these rare ferns is the Adder's-Tongue (*Ophioglossum vulgatum*), a single undivided leaf not much larger than the bowl of a tea-spoon, and clasping a stem which shoots up a little higher and bears the fructification in a sort of spike. A student, seeing this fern embalmed in an herbarium, asked his professor once where he could obtain a specimen. The answer was, "Go to a wet meadow, and crawl around on your hands and knees half a day, and perhaps you will find one."

Of all the gentle plants and rare, may be the Climbing Fern (*Lygodium palmatum*) is the most singular. A smooth, twining stem from one to three feet high, with a roundish leaf or frondlet, deeply parted, and looking some like a five-rayed star. It used to abound in a certain meadow in Old Windsor near Hartford, but the people of that city, having none of the tender feelings of a botanist, carried it away for purposes of decoration. What little now remains is protected by a statute.

The Scolopendrium or Hart's-Tongue is king of all your rare and solitary ferns. It lives apart from the great herd of plants in a kind of royal solitude, as if it had gone there to wait on its own inspiration. Its haunts are named in "Silliman's Journal," lest they be forgotten. Botanists make long journeys to find it. I once thought I ought to see it. I could wait for that little Schizæa down in the pine-barrens of New Jersey; I could wait for that Rock Brake which grows on Isle Royal and "high northward;" I was in no hurry for the Lip-Ferns of Virginia, or the Tree-Ferns of Florida. Scolopendrium was a passion with me. It had a gripe on my heart like some poor kinds of love. So we started one day for that wild gorge where the Chittenango pours his little pitcher over the dizzy rocks. Leaving the level country through which the New York Central Railway passes, we enter the narrow valley of the Chittenango Creek; we pass through a village; we pass lime-kilns, and square, solid mile-stones; fetid sulphur springs for men, and sweet fountains for horses; red and spotted cattle are feeding on the bits of hillside pastures to the right of us; to the left of us are patches of high gray limestone which overlook trees below them and uphold forests above them. We began our search at the bridge where the road turns away from the creek to get around the falls. Following the line of jagged cliffs which bends in and out, making deep bays into which the sun never shines, we found the Scolopendrium growing in the dense shade of trees and pale Touch-me-nots, and rooting in the light film of leaf-mould which everywhere covers the steep slope of broken stone. There it was; a dense tuft of long crimped leaves, looking for all the world like a bunch of narrow-leafed dock. Stopping a little to feel the spirit of the thing, and to turn up one of its fronds to see the long parallel fruit-dots, which somehow remind you of the stripes on a sergeant's arm, we dug it up eagerly; partly in triumph, for I had hunted for it more than one day; partly in awe of its strange presence; and partly in fear that it would slip away from me. I cared little that day for the hairy men of Saghelien, or for the handful of savages dwindling away in Tasmania. I had small place for ethnology or philanthropy. With the finding of the Scolopendrium my fern-spasm passed off, and my interest in its kind became healthful and steady.

Notes of Travel.

Ornamental Gardening near Philadelphia.

A NUMBER of elegant gardens and villa grounds, laid out with excellent taste, can be found in the vicinity of Philadelphia.

Whether owing to the greater love for plants, or the greater income of its citizens, or the desire to secure every comfort to make the contentment of home life complete, it is yet remarkable that here more money is spent for landscape decoration, in proportion to the means of the citizens, than any other large city of the United States.

Chesnut Hill, a pleasant suburb of Germantown, and about 15 miles from the city of Philadelphia, contains some gems of this description.

Charles H. Miller has, for many years, been engaged in the superintendence of the grounds of many wealthy residents of this vicinity, and lately we enjoyed the pleasure of an extensive ride with him through some of the best. Perhaps no place of small extent was so exquisite in its effects as that of Miss Biddle (one of the descendants of Nicholas Biddle). The house, though built of stone, and setting close to the street, still contained nearly an acre in the rear, which, from the style of planting, appeared fully three times the size. The edges near the fences were planted in close, dense-growing evergreens and deciduous trees, leaving the center of the lawn perfectly smooth and unbroken in extent. A very pretty specimen of the *Mossycup Oak* stood alone by the path, showing a most picturesque habit. It is a wonder that it is not oftener used in landscape gardening. Its graceful habit and spread of branches is a great recommendation in its favor. The rear of the house is built with piazzas on each story, and over them has clambered climbing vines in the greatest profusion, creating a most lovely picture, as one looks at it from a distance. The Wild American Grape Vine is here used freely for climbing purposes; likewise the Ivy, and if we were to decide which was the prettiest, we would prefer the former. The view of these vine-covered piazzas, heavily enveloped in the thrifty, climbing greenery, presented a rare picture of rural elegance. In the piazza at the front of the house, were other climbing vines, the Honeysuckle, Jessamine, etc., and by the side of the steps we noticed one of the broad borders cut in the turf, covered with the Honeysuckle, which was here made use of as a bedding plant. At the farther edge of Chestnut Hill, on a prominent elevation overlooking quite an extent of beautiful scenery beyond, are the residences of Charles and Edward Trotter. The nature of the ground at time of first purchase was very forbidding, but by the skill of Mr. Miller, and unlimited capital to aid him, the situation has been rendered exceedingly picturesque. We could not help noticing here, a happy example of true art in the selection of ground for the residences, and at the same time, the choice of designs for improvement of the lawn. Each home has a view of hill or valley from its own doors, which the other does not possess, and the gardening decorations have been carried out so as not to interfere with these views. Near Mr. Chas. Trotter's, advantage has been taken of some inequalities of the ground near the edge of a wood, to construct a beautiful *grotto*. Up over the rocky archway are trained the climbing Jessamine and Honeysuckle; on the sides of the rocks beyond, are caught here and there roots of Ivy, and sprigs of Ferns, which will soon grow and cover the surface. At the foot of the rock are beds for Mosses and Lycopodia. At the farther edge of

the large Grotto (which is 25 feet in diameter), is another inner grotto, hanging under the green arch of leafy trees overhead. This grotto contains a little statue, and at the bottom is a pool of translucent water, which has dripped, drop by drop, from a mossy bank hanging overhead. In the center of the open grotto are beds of subtropical plants, thriving—*some* even more finely than if they had been kept in a greenhouse. At various intervals, along the edge of a wood which adjoins the place, Mr. Miller has planted groups of wild Ferns and shrubs. One pretty bed in particular contained Ferns in the center, with a belt of Ivy trailing low around it.

The use of Ivy is quite frequent among the flower beds of this place. For instance, nothing could be more neat than one bed of Rhododendrons by the side of the road, which was planted with Rhododendrons in the center; on the edge were gathered low Azaleas, and all over the ground beneath was a creeping mass of Ivy, hiding its bareness. Across the lawn, at various places, were other beds where Ivy was used. One of Pampas Grass in the center, was surrounded on the edge with a little Ivy-covered wire arbor. The wire was semicircular, bent at each end in the ground, rising six inches above the surface, and about twelve inches wide. Vases were also seen containing plants above, and their base surrounded with the Ivy.

The most attractive beds were, of course, the Geraniums. One was planted with a solid mass, six by twelve feet, of *The Attraction*; another, same size, with *The Lucius*. Both are profuse bloomers, and throw very dense trusses. The shade of the former is a little brighter scarlet than the latter.

By their side, beds of Coleus appeared but pale in color, and even the Salvia seemed less brilliant. Among various plans for pretty garden beds, nothing was better or more chaste than a few devoted to the Vincas. They are very unique, and, besides thrifty in growth, have the merit of easy management.

One subtropical bed attracted special attention. It consisted of the *Arundo Donax* in the center, next surrounded by the *Abutilon Thompsonii*, then the *Achyranthus Lindeni*, the outer edge of the bed being bordered with the *Centaurea gymnocarpa*. Another bed, small, contained the *Centaurea* in the center, with *Alternanthera versicolor* on the outer edge.

In another part of the grounds were several *Rosaries*, each Rosary being in the form of a bed with two semicircles, one within the other, planted with roses. These semicircular beds succeeded one another down a side path; between the points of each bed was erected a little wire arbor, up the sides of which were trained the long running arms of some creeping vine. The sorts most preferred were the *Gem of the Prairies Rose*, *Prairie Queen Rose*, *Baltimore Belle*, *Woodland Margaret*, and among the Bengals, *Washington*. It is the intention to train a wire from the summit of each wire arch, to the next one, and permit it to be covered with climbers.

Among the roses tied to stakes, planted in the Rosaries, the following seemed to be most preferred:

Homer, a pretty fall rose, pink color; *America*, white; *Washington*, red; *Victor Verdier*, splendid pink.

Among other attractions of the place are beds of the *Hydrangea paniculata grandiflora*, one of the handsomest summer and fall flowering shrubs we now have. One bed of the *Erianthus Ravennæ*, 10 feet high, was also noticeable, waving their

grayish copper-colored plumes in the air. It is perfectly hardy, and easily grown on any place. To heighten the effect of it, plant a belt of *Pampas Grass* around it, and you have a very desirable contrast.

Floral Nursery.

The floral gardens of Miller and Hayes appeared more highly decorated than at any previous time of the spring or summer. The position of the gardens, immediately fronting upon the road, with a back ground of long ranges of conservatories, gives to the place a semitropical aspect. Numerous vases, decorated with Yuccas and Agaves, appeared in contrast with some of the newer and finer sort of evergreens.

Most of the newer and best roses, evergreens, geraniums, etc., are imported by this firm as quick as they have made their appearance in England; and among their customers are many who purchase regardless of price. Most of the stock of these gardens are sold at prices which might cause the heart of an ordinary florist to be full of envy, such as roses, $3 to $5 each; new evergreens, $5 each, and other plants in proportion. Among the best of the newer evergreens, preference is given to the *Retinispora plumosa*, and also the *R. Amea*, which have a graceful, feathery outline, not unlike the *Hemlock spruce*. Among other new plants suggested by Mr. Hayes, as peculiarly valuable, and now sufficiently well-tested for general cultivation, are the *Aralia quincunceus*, or *A. Japonica* for subtropical beds; also the *Althea variegata*—the single flower is better than the double; also *Mahonia fortunei*, *Juniperus Hymalis*, *Cupressus Nutkaensis*, and *Yucca Recurva* for vases, are among new and very fine as well as rare plants.

The *Euonymus Radicans variegata*, is a beautiful silver variegated variety, tinted red, trailing.

New Roses.

All the best, newest and most rare of the European Roses are tested here as fast as they appear. Some of them have proved decided acquisitions, and a list of the best of each class has been filled out for us by Mr. Hayes, as follows:

New Roses, 1872.

Coquette de Lyon (Tea)—Flowers canary color, medium size, fine form, full; growth vigorous.

Madame Azelie Imbert (Tea)—Flowers rose; back of petals white; large, full, and fine form; growth vigorous.

Madame Berard (Tea)—Flowers clear rose; large, full, and fine form; good habit and vigorous growth.

Novelties, 1871.

Princess Christian—A remarkable rose; flowers bright, rosy peach, sometimes salmon, glossy, very large, very double, and fine cupped form; growth robust; foliage and habit perfect, and of surpassing beauty, being distinct in color and character.

Virgil (H. P.)—Flowers clear lavender pink; very large, full, and of perfect form; a fair distinct rose, hardy free growth, and very sweet.

Comtesse d'Oxford (H. P.)—Flowers bright carmine red, shaded; very large and full, and of fine foliage; handsome.

Marquise de Castellane (H. P.)—Flowers a beautiful bright rose; very large and full; form perfect; blooms freely.

La Motte Sanguine (H. P.)—Bright reddish carmine; large and fine; foliage good; growth vigorous.

Louisa Wood (H. P.)—Bright rose; large and full; growth moderate.

Paul Neron (H. P.)—Dark rose; very large, of fine form and habit; growth very vigorous; a seedling from Victor Verdier; *the largest* rose which has ever blossomed in this country.

General Collection of Roses.

Among a list of five or six hundred, the following have been selected as the very choicest. This list will be found very valuable for consultation by any about planting.

Tea Roses.

Belle Lyonnaise—Deep canary yellow, changing to white, slightly tinted with salmon; large, full, of fine form and habit; growth vigorous; a seedling from *Gloire d'Dijon.*

Madame Celina Noirey—Delicate shaded rose, back of petals purplish red; large, full habit; one of the best.

Madame Hippolyte Jamain—Outer petals pure white; large; center petals smaller and of a coppery yellow, tipped with delicate rose; large, full and of fine form; growth vigorous.

Sulphurieux—Sulphur yellow, of medium size; fine form, full; growth vigorous.

Madame Margotten—Beautiful dark citron, yellow center of deeper shade; large and fine form; profuse bloomer.

Marie Sisley—Yellowish white, broadly margined with bright rose; large, full and of fine form and habit.

Monsieur Furtado—Clear sulphur yellow; fine form, and full.

Reine du Portugal—Very deep, bright yellow, sometimes shaded with rose and copper; full.

Vicomtesse de Cazes—Yellow; center deep yellow, tinted with copper color; large and very double.

Noisette Roses.

Margaretta—Yellow, edged with pure white, shaded with rose; full, and fine form and habit.

Bourbon Roses.

Souvenir de la Malmaison—Clear flesh color; large and double; fine autumn rose.

Moss Roses.

Madame William Paul—Very bright rose; large, full, finely cupped form; flowers freely; growth vigorous; said to be the best perpetual Moss Rose yet introduced.

Hybrid Perpetual Roses.

Bertha Baron—Beautiful delicate rose, lightly shaded white.

Boule de Niege—Pure white; medium size; full and fine form.

Comtess d'Oxford—Bright carmine red, shaded; large, full and fine form; foliage handsome; one of the best.

Duke of Edinburgh—Brilliant scarlet crimson, shaded maroon; large, full and fine.

Ferdinand de Lesseps—Purple, shaded with violet; large, full and fine form.

Glory of Waltham—Crimson, very sweet; one of the best climbing or pillar roses.

La France—Beautiful pale peach, rose center; large and full; free bloomer.

Madame Chirard—Clear rose color; large, full and fine form; first class rose.

Madame La Baronne de Rothschild—Beautiful clear pale rose, shaded with white; large and double; one of the best.

Madame Victor Verdier—Rich bright cherry color; blooms in clusters; superb and effective rose.

M'lle Juliette Halphen—Bright flesh colored rose; fine form and habit.

Marquise de Castellane—Beautiful bright rose; perfect form; blooms freely.

Monsieur Woolfield—Beautiful bright rose; large and globular.

Perfection de Lyon—Rose color; large and full; first class.

Pierre Notting—Very dark red, shaded with violet; large and good habit; one of the best.

Pitord—Fiery red, velvety; fine form and effective.

Thyra Hammerich—Delicate bright rosy flesh; large and double; very distinct.

GERANIUMS.

The following selection has been made from the best of the new imported varieties:

New Silver Edged Geraniums.

Avalanche—Flowers pure white; good shape; trusses of flowers thrown in great quantity just above the leaves, which are dark green, with a broad edge of pure white; dwarf grower and very abundant bloomer.

The new white flowering geraniums differ from others of the same class, in their abundant flowering; they present, when in full bloom, a dense and unbroken mass of white flowers, which blend with the variegated leaves most charmingly.

New Bedding Geraniums.

Bonfire—Flowers crimson scarlet; very large; good trusses, produced in great abundance; leaves zoned.

Caractacus—Flowers dark rosy scarlet, beautiful shade of color; large and perfect truss; leaves faintly zoned.

Magnum Bonum—Flowers yellowish salmon; good shape, and truss very large.

M'lle Nilsson—Beautiful lilac rose, with white center; trusses large; fine for massing.

Penelope—Flowers pink, with white blotch in upper petals; good substance and shape; dwarf habit; very free and constant; leaves darkly zoned.

New Golden Variegated Geranium.

Plutarch—Leaves large, round and smooth; very flat and of stout leathery substance; small, green center, surrounded with broad, black zone, strongly illuminated on the outer edge of circle with scarlet crimson, succeeded by a regular margin of bright yellow; very free, hardy and robust; the blackest of all zones, exquisitely relieved with the intensest crimson.

New Nosegay and Zonale Geranium.

Lion Heart—Rosy salmon; very handsome.

THE WESTERN HORTICULTURIST
MARK MILLER EDITOR DES MOINES, IOWA

Are Bees Detrimental to Fruits?

THIS question, if not quite so "old as the hills," runneth far back into the past, and still appears no nearer a solution than a century or more ago. As for our part, we take the negative of the question, believing that the interests of the apiarian and the fruit-grower run parallel. We have kept bees for twenty years, and for some years past in considerable numbers alongside the grape, raspberry, plum, and other fruits, without the slightest depredations, so far as we have been able to discover. Actual experiments seem to prove this prejudice against the bee unfounded. At a meeting of the Apiarians, some years ago, held at Stuttgard, in Germany, Prof. Lucas, a celebrated pomologist, is reported to have remarked:

"A careful and observant bee keeper, at Potsdam, writes to me that his trees yield decidedly larger crops since he has established an apiary in his orchard, and the annual crop is now more certain and regular than before, though his trees had always received due attention.

"Some years ago, a wealthy lady in Germany established a greenhouse at considerable cost, and stocked it with a great variety of choice native and exotic fruit trees—expecting, in due time, to have remunerative crops. Time passed, and annually there was a superabundance of blossoms, with only a very little fruit. Various plans were devised and adopted to bring the trees to bearing, but without success, till it was suggested that the blossoms needed fertilization, and that by means of bees the needed work could be effected. A hive of busy honey gatherers was introduced next season; the remedy was effectual—there was no longer any difficulty in producing crops there. The bees distributed the pollen, and the *setting* of the fruit followed naturally."

We also have the following testimony upon the same subject, from the *American Bee Journal:*

"In 1774, Count Anthony, of Porrings, Seefield, in Bavaria, President of the Academy of Science at Munich, striving to re-introduce bee culture on his patrimonial estate, found in this generally prevalent prejudice (i. e. that the bees injured the fruit by its visits to the flowers), the chief obstacle to success. To overcome this, he labored assiduously to show that bees, far from being injurious, were directly beneficial in the fructification of blossoms—causing the fruit to *set* by conveying the fertilizing pollen from tree to tree, and from flower to flower. He proved, moreover, by official family record, that a century earlier, when bees were kept by every tenant on the estate, fruit was abundant; whereas, when only seven kept bees, and none of those had more than three colonies, fruit was scarcer than ever among the tenantry."

Manipulation of the Grape Vine.

BY WM. H. YEOMANS, COLUMBIA, CT.

THE laws of nature are inflexible and unchangeable. And while from the first a grand harmonious plan of laws has been in existence, the maintenance, and, so to speak, the execution of which has not only added beauty to the face of the earth, but sustenance to both man and beast. Every plant, every tree, in fact every product of the vegetable kingdom, has a separate and distinct mode of development of its roots, its branches, and the perfection and maturity of its fruit, which depend upon very various conditions, in order to arrive at what would be termed perfect development. Thus, different elements enter into the composition of different plants, and in different parts of the plant, so that unless all these elements are contained in the soil, there will be irregularity of growth, or perhaps lack of maturity of seed. To assist in these matters is the province of the farmer, and this is what constitutes cultivation. It is hardly to be presumed that the original qualities of any fruit or vegetable can be improved in the least; and yet many times these qualities which lie hidden can be developed by the assistance of man.

But as regards flavor, etc., it must remain the same as by nature established, and so while oftentimes the size of fruit may be improved, its original characteristics of flavor, color, form, manner of growth, etc., must remain fixed and steadfast. And is it not a fact, that the nearer the mode of cultivation is confined to the manifest design of nature, the more favorable, as a general rule, will be the result? Take, for instance, the growth of the grape vine in the state of nature; it almost invariably is found spreading itself over the branches of trees, or a growth of less size, usually denominated brush, or bushes. Nor is it confined to dry upland, since it is frequently found in its most vigorous growth in what would naturally be called a brush swamp. In such localities the vine is usually very spreading, covering over the tops of the bushes with an exuberance of foliage, from beneath which depend the clusters of luscious fruit in rich profusion. This same picture, too, can be witnessed year after year, and still the vine receives no pruning, laying down, mulching, or other care, except such as nature itself furnishes. The writer has seen many a vine laden with bushels of fruit, the quality of which would sink none in comparison with famous cultivated varieties, and with no care whatever, and still the great cry goes forth, prune to the trellis, cut back, protect in winter, thin out the fruit, etc., etc., in order to obtain a dozen or two bunches of fruit. Now, while it is not the intention of this article to commence a warfare against the whole community of professional grape growers, it is desirable that the subject should be looked at somewhat after the manner of natural growth, and discover, if possible, the effect upon the perfection of the fruit.

Now, in the first place, it must be admitted that the vine requires light, since in all cases of natural growth the vine itself indicates this; since it invariably climbs to the topmost branches of the brush or trees, wherever it is located, as if the rays of the sun were necessary to the perfect development of the vine. This cannot be attributed to any natural tendency to climb, since many cases can be cited in which, where the rays of the sun could fall, the vine was equally content to spread itself

upon small bushes only two feet from the ground, although a larger growth was within reach of its tendrils. Again, a free circulation of air is imperatively demanded by the vine, which is abundantly provided by its natural growth. It may be said that all of this is given by "scientific training." It is very true, all this is given, and more too, and there is where the great difficulty lies. The ends of the vines must be pinched back, and portions of the foliage must be stripped, in order to furnish a supply of light and air, which is entirely contrary to the original plan of nature, or else the natural vine has widely departed from the law of its growth.

The tendency of the natural vine is to spread its branches, and while it puts forth its foliage as if to catch every ray of the sun, the same also serves as a shield of protection to the fruit which gracefully hangs beneath this beautiful canopy of green, and which seldom, if ever, catches the sun's rays; still in this condition the fruit is fully exposed to a free circulation of air. Now reverse this while the fruit is yet green; so disarrange any grape vine as to make a general exposure of the fruit, and it will be greatly injured, if not wholly ruined, and still the cry is, strip off the foliage and pinch back the young shoots, when naturally the very object apparently is to send these out beyond the growth of fruit, so as to protect it beyond a peradventure. The ground, then, can be taken, that it is not natural to train to a trellis, and which has been proven in more instances than one. A writer upon this subject declared, that having discovered a very valuable vine growing wild, he obtained a layer, and attempted to train to a trellis, which, after considerable effort, proved fruitless, as the vine would bear but very little fruit, and that having little resemblance to the original; considering further efforts useless, the vine was abandoned; but being situated near a tree, it soon reached forth and seized upon the tree, and took up its abode among its branches, and, singular enough, was discovered to be loaded with a large supply of fruit, and exactly resembling the original.

Another case occurred, which came under the writer's own observation: A vine of the Hartford Prolific variety was trained to a trellis and fruited comparatively well; it was, however, situated quite near an apple tree, into which a number of its branches found their way, and were left undisturbed. The next year these fruited, and the result was, that while they were the product of the same vine, those which ripened in the tree were much larger, better ripened, sweeter, and, in fact, superior in every particular to those grown upon the trellis. Still, again, a singular case came to notice: A vine came up near two small trees; it grew, a portion traversed the trees, and a portion appeared to prefer a less elevated position, and spread over some small bushes, growing but a foot or two in height from the ground. It came to bearing, and the lower portion matured nearly a fortnight earlier than those upon the trees. This was undoubtedly in consequence of the accumulation of heat in the ground, which greatly accelerated the ripening of the fruit situated so near it. It goes to prove that where it can be accomplished, the maturity of the fruit will be hastened by allowing the vine to grow near the ground. It may then be safely laid down as a rule, that it sometimes is as well, or better, to follow the course indicated by nature. And while it is not expected that this article will influence the great grape growers of our country, it is believed that if those who raise but few for family use are so

situated as to allow the same to follow the natural inclinations of the vine, the result will be more satisfactory than the attempt to follow each arbitrary rule laid down by the professional fruit-grower.

Forests and Rainfall.

Will the Presence of Forests or other Trees Increase the Amount of Rainfall in Countries that are Otherwise Arid?

BY DR. WM. M. HOWSLEY, LEAVENWORTH, KANSAS.

THIS subject was pretty well, or at least extensively, discussed at the late semi-Annual Meeting of the Kansas State Horticultural Society, at Humboldt, in June last. These discussions grew out of a paper read by Prof. Gale, of Manhattan Agricultural College. While the discussions took a pretty wide range, that of tree culture, in regard to its influence upon rainfall, seemed to be the absorbing topic, and was more fully ventilated than any other growing out of the Professor's paper. Upon this, as upon various questions, numerous opinions prevailed. Some were of the affirmative opinion, while others thought that forests could have no particular influence in increasing the amount of rainfall.

There were some facts, presented by Mr. Kingsbury, railroad engineer, which went to show the favorable influence of forests in producing rain. There was, among all the theories and facts presented, one fact which we believe could not be accounted for, but upon the principle of the salutary influence which forest trees have upon the amount of rainfall in any country. The fact alluded to was the amount of rain in the Rocky Mountains, whence all of our great rivers, flowing East and South to the Mississippi and Gulf, originate, and for centuries past no rain, or scarcely any, from near the base of these mountains, eastward for some three or four hundred miles. On the mountains there is an abundance of forest growth, while east of them, for the distance named, the country is a barren waste.

This is a point upon which, in discussions upon this subject, it would be, in our opinion, well to reflect. It certainly throws some enormous difficulties in the way of those who deny the beneficial influence of forest trees upon the amount of rainfall.

Whether it is the extreme altitude of the clouds, which form high up the sides of the mountains, that do not get within suitable distance of the earth to pour down the water contained, until they reach a certain distance from the mountain, or whether the timber would bring the clouds down within raining distance of the plains, or whether the clouds start from the mountain tops or sides, with an inclination to bring them near enough to the earth only at a certain distance from the mountains, are points which furnish ample food for thought.

Should the mountain forests have the influence which they are here believed to possess, their wanton destruction would seem to form a justifiable plea for legislative interference.

Figs. Why not in the Northern Markets?

THE Mobile *Register* would like to know what there is to hinder the shipment of fresh figs in safety through to the Northern and Western markets from the South. It makes mention of a shipment of plums from Sacramento, Cal., to Mobile, in good condition, and remarks, "if that can be thus, it would sound very strange to say that figs could not be transported in good condition from Mobile to St. Louis or Chicago. The plums were neatly done up in tissue paper. Our large varieties of figs could be put up in the same way, and be made profitable beyond a doubt."

Sure enough, as we have often wondered, why should not figs, fresh from the trees, be found in all our Northern markets, in these days of refrigerator cars and quick transit? We believe the fig is not much, if any more perishable than the plum or the peach. Hitherto, from what we know, the culture of the fig has not received the attention in this country that the business deserves. No fruit is grown with less

Fig. 1.

Fig. 2.

care or trouble in the Southern States, and we believe the tree stands with little or no winter protection in some parts of the Middle States. The tree fruits at an early age, and is grown from cuttings with the same facility as the currant, cotton wood, willow, etc. Nor are we aware that any special attention has been given to sorts in this country till of late. In this connection we copy the following, which may be of service to some of our readers, from the *Pacific Rural Press*, in reply to a correspondent who asks: "Will you please favor me with a description of the white Smyrna fig, also the shape of the leaf; we have two varieties of figs here, both are claimed to be the white Smyrna; we are very anxious to know which is the right one?"

"There are thirty or forty well-known distinct varieties of figs, and of these there are some eight or ten cultivated in California. Among them we find the true Smyrna

or Turkish figs, or rather the kinds from which are made, by drying, the genuine Smyrna figs of commerce. They are common in Turkey, Egypt, and all along the shores of the Mediterranean to Portugal, and are sometimes called Lisbon figs.

"One of these is known as the large White Genoa, and is one of the largest figs grown; obovate or pear shaped, with pale yellow, thin skin; the pulp is red, very sweet, and in California grows to so large size as to make it difficult to dry them. The leaf of this variety is represented by Fig 1, of course greatly lessened from the natural size.

"The other Fig., No. 2, is the White or Green Ischia, known also as the St. Domingo. This is a much smaller fig, seldom more than an inch and a quarter in diameter, with a pale yellowish green skin, so thin that the dark purple pulp can be seen through it. It is a more moderate grower than the Genoa in most soils, but a good bearer and probably the best known fig for drying, being very sweet and of delicious flavor, and on account of its smaller size more easily handled without injury than the larger White Genoa.

"Most of the purple or black figs have leaves similar to Fig. 2, and nearly all the varieties, if allowed to get dead ripe on the tree, and then carefully managed in the drying, will make a tolerable dried fig; but they never equal the white varieties, and like the poor wines of any country, should never be put upon the market to the injury of the reputation of better sorts. In all the catalogues at our command, none give the name of Smyrna to any particular variety; but they do speak of several varieties of Smyrna or Turkish figs as among the best for drying for export."

How to Test Wines.

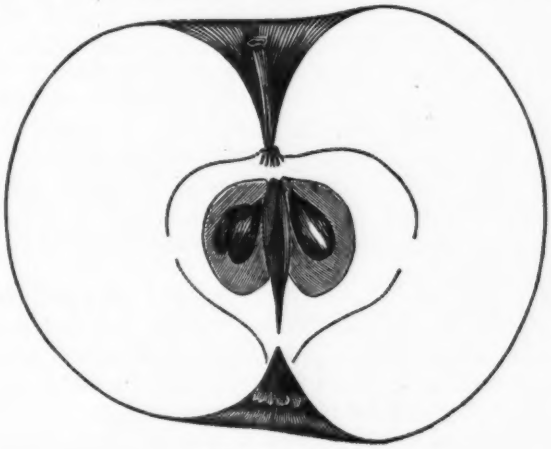
AT a meeting of the Merrimac (Mo.) Horticultural Society, an essay was read by Dr. Galiny, on the manipulation and test of wines, from which we glean the following:

The tests of wine are two kinds—the alcoholometer and tasting. The first is to prove how much alcohol the wine contains, and is based on the knowledge of the specific weights of absolute alcohol and water. Suppose a little glass is full from 1,000 grains of water, the same would get full from 792 grains of alcohol—it is one-fifth lighter than alcohol, and its resistance is immensely less. For the purpose now of ascertaining the strength of wine, an instrument has been invented; it is a glass cylinder which, at the bottom end, is ball-shaped, containing mercury. The cylinder is marked off into 100 parts called grades. Now, if you sink the cylinder in a mixture of ten parts alcohol and ninety parts water, the liquid will reach the 10 grade, which shows that it contains 10° of alcohol.

The other test is by taste; the knowledge of it can only be acquired by time and experience—let me explain: Suppose your judgment is required as to a wine; if it is Madeira, it would be necessary that you had tried the genuine Madeira before and became, through taste and smell, fully acquainted with all its characteristics. So it is with all other wines, which I will show at some other time by experiment—but I must beg of you for this purpose to furnish the materials.

The Lawver Apple.

EARLY in July last we received specimens of the Lawver from Mr. Geo. S. Parks, of Parkville, Mo. Specimens were also handed to us at the January meeting of our State Horticultural Society, to test its keeping and other qualities when in prime. There has been a good deal of noise made about this apple. It has been described as of a "rich, mild, tingling acid; very much like the cranberry; finer flavor, leaving an excellent relish, etc." But we do not find it quite so exquisite in flavor as all this would imply. For long keeping qualities it proves one of the very best, while for shipping it must be peerless, for it has a skin akin to the hide of a rhinoc-



The Lawver Apple.

eros. The accompanying engraving and description of the Lawver, we take from one of the specimens received from Mr. Parks.

Size, above medium; form flattened, one sided; skin thick, almost entirely overspread with dark red and specked with grey dots; cavity rather narrow, deep; stem medium to long; basin rather narrow and shallow; core large, open; seeds very large, deep brown; flesh firm, darkish yellow, sprighly, acid, moderately juicy; may be reckoned *good*; season, February to July. On the whole, the Lawver has many good qualities to commend it.

THE WISCONSIN WEEPING WILLOW.—*Editor Western Horticulturist*: I notice in a late number of the *Pomologist*, inquiry from H. C. R., Council Bluffs, concerning the Wisconsin Weeping Willow. I have had this willow growing on my grounds in the neighborhood of this city for three years. Most of the trees went through the winters unscathed, while a few had the tops of their branches killed. I think in ordinary soil, and with little or no cultivation, it will prove hardy enough for Central Iowa.

N. J. HARRIS.

Des Moines, Iowa.

Vine Mortality in the West.

IT is well known that from some cause or other grape vines came out last spring with more or less injury all through the West. As to the cause, there is a difference of opinion among the "vine sages." A noted vineyardist in the region of St. Louis, Mr. Muench, is led by observation to thus theorise upon the cause, as we find in the *Rural World:*

"What in the vine is called the inner bark or liber is, I think, in all plants with stems enduring through winter—such as forest and fruit trees, vines, bushes, etc.—denominated *cambium*. It consists of a green, marrow-like matter, between the outer bark and the woody part of the stem or branch; is chiefly formed in the latter part of the season, and designed as the material from which, in the following spring, the first leaves sprout and also the blossoms come forth. The more completely formed and the more richly stored up the cambium is, the more vigorous will be the first growth of the whole plant or of its several branches in the next season, and also the greater the productiveness. Different reasons may operate singly or in combination to prevent the proper formation of the cambium, such as a very poor soil; a superabundance of branches and limbs; a decrepit or otherwise sickly state of the plants; injury to roots or leaves; very early frosts, or a fall too wet and cold; overbearing; such a dry autumn that the scorched ground affords no nutriment to the tender capillary rootlets."

From all I can see, and as a general thing, the two last mentioned causes combined, have effected the mischief. What of my vines remained uninjured—more than three-fourths—show a brilliant growth, with an abundance of the soundest fruit. Even those varieties that are known to be slow bearers, such as the Maxatawny, Adirondack, etc., will yield a full crop. The Ives beats all others, then follow the Concord, North Carolina, Martha Seedling, Martha, Herbemont, Louisiana, Nauvoo, Arnold's Hybrids, Gœthe, Catawba, Cynthiana, Neosho, Norton.

Are Fruit Trees Gregarious?

EDITOR WESTERN HORTICULTURIST: Or rather, are varieties gregarious or clannish in their original formation or development? Certain facts observed the present season induce the question. I have a seedling peach orchard of about seven thousand trees, fruiting for the first time this year. This singular fact is observed throughout. The seeds were planted indiscriminately in the nursery row, and, of course, transplanted into the orchard the same. In fruiting, certain varieties and characteristics are confined strictly to groups. For instance, where a red cling is found, every tree within a radius of say forty or fifty, produces the exact same fruit in all characteristics—size, shape, color, season, quality of flesh, etc. Then a group of yellow free-stones showing the same characteristics, and so on through the entire orchard as to varieties. Where there are barren trees, or not fruiting this season, the same clannish peculiarity exists—no fruit within about the same radius. This to me is new. Is it a principle known to older and more experienced, or is it an isolated "*happen-so*"—*lusus naturæ*—*rara avis*, if you please?

Brownville, Nebraska. ROBERT W. FURNAS.

Fruit Growing in Virginia.

A CORRESPONDENT of the *New York Tribune*, writing from what is called the "Piedmont" region of Virginia, says of that section of the State for fruit growing: "While eminently adapted for the production of grains and grasses, it is chiefly to its advantages as a fruit-growing region that I would call attention. While the glowing accounts of the production of almonds, oranges, etc., given by your California correspondent, may not be matched in kind, they can be in quality and value by the fruits of our temperate climate—the apple, the grape, the cherry, peach, plum, and pear. One thousand dollars from an acre of grapes have been realized in one year near this town, and $75 from one apple tree in one year. The writer last year gathered 27 bushels of the best winter apples from one tree, and that not a large tree, and the product was sold at from $4 to $6 per barrel. No country in the world is better adapted to the cultivation of the grape. Five successive crops from one vineyard here have proved the entire freedom of the vine from disease, and every crop has been a full one. The absence of frost and fogs from the slopes of our mountain spurs insures a certain return to the cultivator. But one great want exists here—more people, with enterprise and capital, to develop the rare advantage of the land; men to take up and cut up and cultivate the large, unwieldy, and as at present cultivated, unprofitable farms."

The capacity of Virginia, both in climate and soil, for the production of the finest fruits, is beyond question. The writer's remarks in the foregoing quotation were fully verified at the Pomological meeting in Richmond, last fall, by the fine displays of apples, pears, peaches, grapes, and figs, gathered from the orchards and vineyards of the State.

The Grapes of Nauvoo, Ill.

EDITOR WESTERN HORTICULTURIST: The grape crop of Hancock Co., Ill., this year, is a light one. Blight and mildew for the last few years are telling upon the health of the vine, and the decline in the price of wine is discouraging to the vintner. But few new vineyards have been started within the last two years. In the spring of 1868, a correct census of the vines and wine made was taken, which showed 344,101 Catawbas, 57,508 Concords, other varieties, 48,356. Total, 449,965. Varieties not named consisted chiefly of Isabella, Delaware, Clinton, Iona, and Diana. Since then the Ives Seedling, Norton, Virginia, and several numbers of Rogers' Hybrids have been extensively planted. Most or all of these new varieties made a fine show and promised well, but the same causes that affected the older varieties, made a good deal of dead wood among these. Norton's seemed to fare the worst, and many of these were killed, root and branch. Most of the others, including the Catawba and Isabella, sent up new canes, and have made a good growth of wood, promising well for a crop for next year. We have 75 wine-cellars and 150 press-houses, costing $450,000, and the amount of wine made in and around Nauvoo in 1870, as estimated by John Bauer, a prominent wine-grower and a reliable man, was 300,000 gallons. That is probably more than will be made this fall. Still, and notwithstanding all casualties and drawbacks, wine will be plenty and cheap.

Nauvoo, Ill. C. BRADLEY.

What is this "Varmint?"

EDITOR WESTERN HORTICULTURIST: I send you some rolls or chunks of dried leaves, picked from one of my apple trees. I have noticed the same in previous seasons, but not so plenty. What is it; and is it likely to damage the trees? I do not discover that it meddles with anything, only this rolling up of leaves. S. F., *Dubuque, Iowa.*

REMARKS.—It is the Leaf Roller, and is quite common in Western orchards. In years past, it was very plenty in orchards about here; but for a year or two past not much of its work has been seen; we could never see any harm from it, except disfigurement of the trees. The worm is readily detected in autumn by a roll of dry leaves attached to twigs of the trees by a very strong thread-like ligament. It is a little brown worm, about a half inch in length, and is in the center of this, domiciled for the winter, and where, we think, it undergoes transformation—coming out a little brown moth in the latter part of May. We know but little about the habits of this insect, but think it propagates its species by deposit of eggs upon the leaves, which, by some means, are rolled up as seen.

The only remedy we know of, and which is effectual, is to hand-pick the rolls in autumn or winter and burn them. This done a season or two, and you will see no more of it for some time. This insect has been mistaken by some for the apple-core worm—Codling Moth. Nor do we wonder at that, when we see a very pretentious journal, not a thousand miles from New York, mistake it for the Canker Worm.

Wines of Different Districts.

THE *Pacific Rural Press* says, in reference to California wines made from grapes grown on different soils, that they differ "widely in quality, and well they may, for hardly any two soils will produce wines exactly alike. The alluviums of the valleys produce enormous crops of grapes in seasons in which there is neither rust or mildew to injure the vines; but the wines from such localities are generally inferior to those of hilly and mountainous districts.

The wines of the plains, or the red lands of Scaramento valley, are better than from the river alluviums, and nearly equal to those of the foothills adjacent, to the eastward; for the very reason, perhaps, that the red lands are but the debris of the rocks brought down to the plains. Then there are the chalky districts, so called, and the more completely volcanic, that extend for miles together along the foothills, producing wines of a wholly different character from the other, and quite independent of the particular manner of their making up.

Editorial Notes.

Mr. Satterthwaite's Pear Orchard.

Mr. Edwin Satterthwaite's pear orchard, at Jenkintown, Pa., has been for quite a good many years in excellent reputation with Pennsylvania fruit purchasers. We had an opportunity to visit it one afternoon in September last.

The trees are planted in rows about 20 feet apart, and often as closely as 10 feet in the rows, the interspaces being entirely filled with vegetables, and the ground so heavily manured as to supply all crops with an abundance of nutriment.

We had but little time to canvass the merits of all the varieties. Out of his orchard of 7,000 trees, he gives the preference as his best pear to *The Rutter*. It bears with him ten times as much as the Beurre d'Anjou, and twice the Bartlett. It is ripe in October, and keeps a month; fruit is quite large, smooth, ripens up to a golden yellow color, and always sell well in his market. A characteristic of the tree is, that it begins to bear so early, usually the second year after planting, and increasing steadily.

The *Buffum* is with him a good market pear; ripening last of September.

The *Frederich of Wurtemberg* blighted this year quite seriously, and thus has disappointed all previous expectations.

The *Lawrence* with him is better than the *Beurre d'Anjou*, which last drops its leaves badly, and though a good fruit, yet the Lawrence is more productive.

The *St. Michael* is a fine tree; fine shape, and beautiful color; sells well.

The *Howell* bears twice as much as the Bartlett; ripens about ten days after it, and is a very desirable family tree.

The *Belle Lucrative* blights badly.

Manning's Elizabeth is a delicious early variety, which always sells well.

Sheldon, fruit drops from the tree.

Doyenne d'Alencon, among winter pears, is one of the best: ripens when pears are scarce; tree very healthy and productive.

On asking him for a list of best new late pears, he gave the following:

Beurre St. Nicholas—ripens in December and January.

Rutter—ripens in October.

Nouveau Poiteau, Duchesse de Bordeaux, Pound, De Tongres, Doyenne d'Alencon, Lawrence, Doyenne de Comice.

All the above are worthy of trial, although the Rutter is best.

The *Beurre Superfin* is a royal tree in growth, and bears very large pears; ripens in August and September very near that of the Bartlett, although no better in quality nor more productive.

As Mr. Satterthwaite has a retail stand of his own in one of the largest of the Philadelphia markets he has unusual advantages, both for selling his fruit and judging what varieties sell best. Over 200 varieties are now grown and tested by him.

The prices usually obtained are from $8 to $12 per barrel; with this he is satisfied, not being quite so ambitious as a certain Pennsylvania fruit grower we know to get his $12 per doz. Were Mr. Satterthwaite planting an orchard to-day of 1,000 trees, we doubt not over 500 would be late fruit, and of these fully three-fourths would be equally Lawrence and Rutter. As the Rutter has succeeded so well on his place, we would advise fruit growers generally to investigate the merits of this pear for cultivation elsewhere.

The Spanish Chestnut.

A correspondent of *The American Rural Home* advises the cultivation of this tree:

Many trees of Spanish chestnuts in this county bear large crops annually. This season the nuts were not so large as usual, nor the price so high, but I heard of one man who sold from a single tree to the amount of $80, and I know of other trees producing from four to five bushels each. They generally sell readily in the Philadelphia market at from thirty to sixty cents a quart, according to size, and season. An acre of ground planted with Spanish chestnuts would be much more profitable than the same space planted with apple trees; nor would it be much less profitable to plant out the American chestnut, by carefully selecting those bearing large nuts. A tree here and there may be found bearing nuts almost equal in size to the Spanish. By propagating only from such, we might in time rival the latter in size. In other respects, they are now superior. It is only roasted, or boiled, that the Spanish chestnut can be compared to the American. Should chestnuts become more plentiful and cheap, they might, in time, here, as in parts of France, Italy and Spain, be ground for food and make a pleasant and wholesome addition to our *materia alimentaria*. Spanish chestnuts, like our own, differ greatly in size. To grow them with certainty of large size, the best plan is to cut grafts from trees which produce the finest. They succeed perfectly if grafted on American chestnuts. They require but few years to come into bearing.

The Eumelan Grape.

The experience of fruit growers, in Michigan, seems to indicate it to be their best black grape. It is hardy, prolific, and in quality equal to the best black grape they have.

A New Daphne.

The *Revue Horticole* notices a new shrub of great merit, named *Daphne salicifolia*, or the Willow-leaved Daphne. It was procured originally from the Caucasus. There is nothing peculiar in its cultivation, a light loamy, but somewhat sandy soil, such as grow heaths, is adapted to its wants. The flowers are white and very numerous, and its season of flowering is about the middle of April.

A New Plant.

The French gardeners are noticing a new bulbous plant, named the *Homorphophallus papillosus*, which serves as an ornament in the green-house from April to September. The peculiarity of this plant is, that after its brown spathe-like flower is blown, a leaf rises up and bends over it like a helmet, and seems to protect and cover it like an umbrella, which divides into bunches with numerous pinnated leaflets of a fine green color.

Preventive of Leaf Blight.

The *Prairie Farmer* thinks that a dry subsoil and good ventilation under and about the tree tops, in the growing season, will be good preventives; and would like to see tried Mr. Hatheway's blight remedy of copperas, dissolved and poured about a tree, so as to penetrate the earth about the roots.

Dinner Table Decorations.

Our frontispiece this month is a design of a dinner table recently set and exhibited at a recent Crystal Palace Exhibition in London.

The principal object in the design is, to show the best possible display of fruit and flowers, without extravagant expense. The glass fruit dishes are occasionally decorated with fern fronds and evergreen sprays, while two principal floral dishes for bouquets at each end of the table, one handsome center piece, and side bouquets around the table for the guests, make an excellent equipment. In choosing flowers, the decorators avoid Lilies, Stephanotis, Tuberoses, etc., which load the air with heavy perfume, while preference is given to flowers without strong perfume—Grasses, Poppies, Lilies of The Valley, are all well liked.

Fruit Trade of New York.

Some idea of the magnitude of the foreign fruit trade of New York can be gained from the statement, that during the first six months of 1872, the importations of foreign fruit amounted to $2,100,000.

Profits from Melons.

A Maryland fruit-grower this year planted 300 acres in water melons. Last year he realized $14,000 from it. Expects to do better this year.

Profits of Flower Gardening in Holland.

There is said to be a piece of ground of 125 acres near Haarlem, in Holland, planted with hyacinths, which brought in a revenue of $150,000 the past year.

Ohio Horticultural Report, 1871.

The fifth annual report of Ohio State Horticultural Society has been received. The society is in prosperous condition, spends less than it earns, and its members seem to be full of enjoyment. Dr. Warder has been re-elected President, G. W. Campbell, Treasurer, and M. B. Bateham, Secretary.

Bouvardia Vreelandii.

This Bouvardia, introduced by S. B. Vreeland, of Greenville, N. J., seems to have met with favor from English florists. They pronounce it and the Davisonii not only similar, but identical. They admit it to be more prolific of blossom than the Bouvardia Hogarth. Thomas Moore, editor of the *Florist and Pomologist*, says it is a most valuable decorative plant, "it is easily grown in light, rich soil, abounding in leaf mould, and with a night temperature of about 50° in winter. During summer the plants thrive in low, well aired houses, having a north aspect."

Lilium Giganteum.

A beautiful specimen flowered this year at Gordon Castle, Morayshire, England. It had no less than 17 fully expanded flowers, supported on a stem 11 feet in height, and nearly 9 in circumference.

Laxton's Peas.

There has been a great pea show this year, by the Royal Horticultural Society, at Chiswick. The indefatigable Laxton was there, and carried off the eight highest certificates:

Laxton's Harbinger—the very earliest pea in cultivation.

Laxton's Superlative—largest pod of any pea in cultivation.

Laxton's Fillbasket—most prolific pea in cultivation.
Laxton's Omega—highest quality of pea in cultivation.
These appear to be the best of the list.

Failure of American Florists to take Interest in Horticultural Literature.

It is really lamentable to behold such apparent apathy of interest among professional gardeners, florists, and horticultural writers. At no time in ten years has there been such scarcity of contributions from the pens of practical men. Whether it is because they are waiting to be *invited* or not, or, whether they expect to be *paid*, or not, for their supremely valuable influence, we cannot say; but we speak for all good journals—*every writer is welcome.* None of our horticultural journals, and even most of our agricultural journals cannot afford to pay for contributions. Our papers keep standing invitations to all to write. If any complain of the poverty of interest in journals, or poor progress of horticulture, they must attribute it to the little interest taken by the profession in writing up appropriate topics connected with it. We see but few articles now-a-days from florists, describing their experience or opinion of new varieties. We recommend florists and nurserymen to pay more attention to literary topics—write more, and your trade will thrive.

Ask Questions.

We invite our readers to ask questions. No better way can be devised to make a journal interesting, than to have a pleasant "gossip with correspondents." An interchange of inquiry and information among subscribers is very much needed in horticultural matters. All requested to write and contribute information.

Fine Seckel Pears.

Specimens of fine Seckel pears have been forwarded to us by A. D. Webb, Bowling Green, Ky. They are the largest we have ever seen, and many of them measured eight inches in circumference.

The Water Cress.

We are pleased to see a word said for this neglected salad plant, by the *Western Rural*:

This grateful salad (*Nasturtium officinale*), which is now found indigenous in many localities in the United States wherever there is living water, may be multiplied indefinitely, and always commands a ready sale in our principal cities. Any farmer who has a running stream or pond fed by living water may at least raise enough for home consumption, and near cities, or where railroad transportation is available, it may be cultivated with profit.

It is an aquatic perennial; and where coming up spontaneously, or sown, its roots once obtaining a foothold, soon cover the surface of the water, and thereafter yield an abundant supply. It often brings from three to five dollars per bushel, or one dollar per peach basket full.

When the water is shallow, all that is necessary is to drop the seed into the water in the fall, and it will usually grow without further trouble; or in the spring the roots may be planted directly, at the distance of one to two feet from each other. It is anti-scorbutic and exceedingly agreeable to the taste; is truly valuable as one of our best spring salads, and it is only the want of knowledge relating to the habits and cultivation of this plant, that prevents its more universal cultivation. Trout streams, especially, are well adapted to the cultivation of this plant, since the water for raising healthy trout must be pure, and pure water gives a peculiarly agreeable flavor to the plant.

The seed is exceedingly fine, over 100,000 being contained to the ounce. It is

supposed to have been introduced from Europe, but has become naturalized, and wild in many portions of the United States. The stem is from six to eighteen inches long, according to the depth of the water in which it grows, the leaves being borne along the stems, and both the leaves and stems are used for eating.

Gossip About Mark Miller's Farm.

Mark Miller, our western editor, is too modest to speak for himself, but a great many good words have been spoken concerning him, which will bear repetition. He settled in Wisconsin in 1848, and was among some few who organized the Wisconsin State Horticultural Society, in 1853. From that time up he has been intimately identified with the pomological interests of the West.

The *Iowa Daily Register* mentions a visit which it made one day not long back to Mr. Miller's farm, which is located about a mile and a half from the city of Des Moines, Iowa :

In choosing the location, Mr. Miller displayed the admirable taste of a true lover of the beautiful, who combines good sense and practical ideas with the ornamental and romantic,—for the ground on which he located is just what a person would mould, or scoop, or carve to their hand, had they the power to do so. He has been on this farm only four years, but in that time he has made astonishing headway towards the growing of fruit and the general ornamentation of his place. An orchard, numbering about six hundred trees, set out at that time, shows the healthiest, thriftiest appearance of any young orchard we have looked through.

What he has done in the apple tree line, he has also accomplished with pears, cherries, etc. All his trees look healthy, and it seems that bugs, caterpillars, borers, etc., which trouble other fruit-growers, don't visit him, but it is probable that their absence is owing to constant care and watchfulness on his part.

People talk about our rigorous climate, and ominously shake their heads whenever fruit is mentioned; but raising fruit, with men of Mr. Miller's practical knowledge, ready tact, good judgment, earnest industry, seems to be no hard task; and we are glad we have such men among us; and above all, we are glad that we have a person who is so practically and eminently fitted for the difficult duties of editor of our State agricultural paper. So many briefless lawyers, superannuated doctors, and itinerant scribblers are foisted on the public now-a-days, as agricultural editors, that it is absolutely gratifying to find one who, like Mr. Miller, can not only write, but hold the plow, and not only use the scissors, but also the pruning-knife; one that can bring to his editorial desk that practical knowledge which "knows whereof it affirms," and enables its possessor to be just what a true agricultural journalist should.

Complimentary.

The following pleasant notice is given us by the *American Rural Home*:

We have long regarded THE HORTICULTURIST as one of our best journals, devoted exclusively to horticulture. For some months past we have searched eagerly among our exchanges for the *Western Pomologist and Gardener*, certain to find, in its well filled pages, much valuable matter. Now we learn that these two valuable journals, representing Eastern and Western horticulture, are to be consolidated, and that Mark Miller, former editor of the *Pomologist*, will be identified with the editorial management of a special department in THE HORTICULTURIST, to be named the *Western Horticulturist*. We doubt not this union will add greatly to the value of THE HORTICULTURIST, and it has our warmest wishes for its success.

Floral Notes.

Marantas.

Marantas are becoming favorite foliage plants. Their leaves are beautiful. They require a moist, warm atmosphere, and hence are not adapted to rooms or conservatories, except for a short time. Latterly, several very beautiful species have been introduced. *Maranta Veitchii* is a very striking one, the leaves being purple underneath, and deep green above, with yellow markings near the midrib. *Maranta fasciata*, a very handsome species, has green leaves banded with white from the midrib to each margin, which characterize it as peculiarly suited for the decoration of vases. *Maranta rosea-picta* is noticeable for its rosy midrib, and for similarly colored bands upon the leaf, a little way from the margin. Those who have greenhouses will appreciate these plants. It is unfortunate that they cannot be grown in conservatories; but grown in vases, they can be transferred safely to the conservatory or drawing-room on special occasions.—*Rural New Yorker.*

Phlox Drummondii.

This is one of the most satisfactory annuals in cultivation; it is brilliant and varied in color, has a long season, and is easy to grow. A bed of Phlox Drummondii is a dazzling sight on the green lawn; a border of it winding along the path is a constant attraction with its show of varied and delicate blossoms. It is the only annual Phlox known.

In 1835, Drummond, a botanist, sent out by the Glasgow (Scotland) Botanical Society, discovered this annual in Texas, where it is a native. He described it as purple in color, and probably sent home seed gathered from flowers of that shade, but three years later Mrs. Loudon had ten or twelve colors in her collection of Phlox.

This disposition to show a variety of colors is characteristic of the Drummondii, and though florists have striven to grow it, so that the different colors should become fixed and could be depended on to come true from seed, we believe they have never succeeded in fully attaining this. True, a large number of named varieties are advertised each year, and for general purposes they come true enough from seed, but if the grower finds some "sports," or what he deems mixtures, where he expected the bloom to be uniform in type, he must remember that it is not the fault of the seedsman, but a characteristic of the Phlox. Seed may be saved from a plant, for instance, that shows nothing but a white or scarlet flower, and sown by itself next year, a great variation in the color of the flowers thus grown will be seen. Even on one plant, flowers of various shades of color, and differently marked, often occur. The principal colors of Phlox are purple, scarlet, rose and white, with varying shades. No fine yellow is known, although the *Isabellina* takes on that shade slightly, being a shaded white or dull yellow. Neither is there any dark variety like the darkest Pansies. Eye markings and stripes distinguish named varieties.

Amateurs will find it an interesting work to endeavor to fix certain types of the Phlox, and grow pure varieties. There will be disappointment enough attending it, however, as after two or three years trial with fair success, it is not unfrequent to have a lot of seed or plants break out into several types, even if the utmost pains have been taken. But the Phlox in any of its types is so beautiful and constant and profuse of bloom, that it will long remain one of the first favorites among annuals.—*Rural Home.*

The Balsam.

A bed of Balsams makes an inferior show unless the plants have been pruned and trained so as to expose the flowers fully to view. In its natural state the flower is obscured by the leaves of the plant and it is too short stemmed for use in bouquets. But by judicious pruning its beautics may be fully displayed, and it becomes one of the most showy of annuals. The methods of pruning are two: one confining the growth to a single stem by taking off the side shoots, and the other allowing two or three side branches to grow and removing the center shoot. Either method will show far superior re ults to the natural and untrained growth. The Balsams are

strong growers, and varieties embrace many choice colors. The dwarfs show, when well grown, a mass of bloom, and are extremely pretty.—*Rural Home.*

The Gloire de Dijon Rose.

A correspondent of *Hearth and Home* recommends the north aspect of a house as the best place for this famous rose. We fear our latitude is rather far north for it, but it is worth trying here. He says he found it growing fifteen miles north of Philadelphia, where it was protected from the sun in winter by the position of the house, entirely unprotected. It had been planted for six years, and it had not been injured by frost. He says:

The stem, one foot from the ground, would measure about four inches in circumference, and from the ground to the end of the terminal branch the tree measured about eighteen feet. This rose-tree has annually produced a profusion of flowers. Where this rose is growing, the Delaware river is about half a mile in width, and it has nothing to protect it from the severe northerly winds. It seems to me that this rose must be more hardy than its congeners; than a northern and exposed aspect arrests late autumnal growth, thereby favoring the perfect ripening of the wood; and its complete protection from the sun during the winter prevents the flow of sap which would occur if it occupied a southerly aspect. An examination of the plant referred to has taught me a lesson; and as soon as the season will permit I shall plant several Gloire de Dijons on the north side of my residence.

Pœonies.

The greater part of the pœonies in cultivation originated from species natives of very cold climates, and some of the earliest blooming sorts come from Siberia. Some of these are very beautiful, and bloom with the Hyacinthe, Snowdrop, Tulip, and other early spring-flowering bulbs. One of the prettiest of these Siberian pœonies is the double fringe-leaved *P. tenuifolia pleno.* The flowers are deep crimson, and only about two inches in diameter. It is an improved variety of the wild, single species, and only grows six to ten inches high. The foliage is as handsome as the flowers, being finely cut, looking more like green feathers than leaves. There are also several other Siberian species, such as the *P. tritenatar*, or thrice-three-leaflets, and the *P. vestalis*, or white Siberian, *P. uniflora*, or one-flowered, and many other beautiful species and varieties. The rage for new plants has made people overlook these old and valuable plants, and has resulted in a great loss to our gardens.—*Rural New Yorker.*

A Grand Herbarium.

The herbarium of Columbia college, New York, is to have added to it the immense collection of Dr. Meissner, the distinguished Professor of the University of Basle. This herbarium contains 63,000 species, and is purchased for the college through the liberality of J. J. Crook, Esq., a wealthy amateur scientist. The present herbarium of the college is founded on the invaluable one of Dr. John Torrey, and is especially rich in typical specimens. With the proposed addition it will be the largest herbarium in the country.

Knots on Plum Trees.

A Maryland writer to the *Practical Farmer*, says: Sixteen years ago I came to this place, and found a young Morello tree, very badly affected with knots. For an experiment, I went to work and cut all the small branches off, and was careful to burn them; and those on large limbs, such as we did not wish cut off, were shaved down and saturated with spirits of turpentine. The next year, finding the knots much decreased in number, the treatment was repeated—and following it up from year to year, the tree is now living and thrifty, as are also several young trees, which I have since planted. I believe this treatment, if strictly followed, will overcome this affection, for I see in this section even wild cherry trees entirely dead from the above disease (or, as I believe, insects).

Horticultural Notes.

Dr. Hull's Curculio Catcher.

Dr. Hull says he is able to go over 960 of his trees, three years old, in 3½ hours. This is at the rate of 275 trees an hour, or nearly five a minute. Pretty rapid work, the ground must be clean, trunks straight, walking quick, and knocking quicker still. The new machine now being patented is suspended from the shoulders of a man standing in the center (instead of as formerly mounted upon a wheelbarrow). A slit a foot wide in the canvass before him enables him to carry the machine under and about a tree, when the slit is covered by a strip of cotton easily and quickly, and the tree struck with a covered mallet or maul. The machine weighs only eight or ten pounds.

Mulching Cherry Trees.

The *Country Gentleman* recommends mulching a space four or five feet in diameter, around young cherry trees set out last fall or spring, as they are very apt to die from the heat of midsummer.

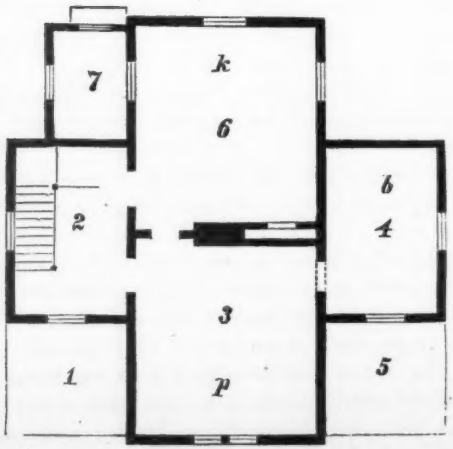
Burns' New Black Cap Raspberry.

The *American Rural Home* is much pleased with this, and thinks it better than Doolittle. Two years ago, this last spring, we received by mail from Mr. Burns, one plant, from which we made a year ago twenty. Last year the one plant fruited, and this year the one-and-twenty. It is a very hardy, vigorous cane, and exceedingly productive, the two-year-old cane yielding over two quarts, and the yearlings very heavily loaded. The berries are larger, more pulp in proportion to the seeds, and more bloom than Doolittle, jucier and sweeter. As regards its flavor, we find quite a difference of opinion among those whose tastes we have consulted, some preferring Doolittle on account of greater acidity; others giving preference to Burns. From present indications we believe that it will prove more profitable as a market berry than Doolittle, from its being earlier and more productive.

Profits of Orange Culture in California.

Charles Nordhoff, gives in *Harper's Magazine*, some very astonishing reports of the profits of orange culture in California: Sixty trees are planted to the acre. They come into bearing slowly, but at ten years from the seed, or eight years from planting out the nursery trees, the lemon will bring 600 and the orange 1,000 to the tree; and I have seen 2,000 lemons, or 2,800 oranges, on a single tree at fifteen years of age. Now lemons sell in San Francisco at $30, and oranges at about $15 to $35 per thousand; and from the tenth year of a tree's age, with good culture, irrigation, and in a fit climate—that is to say, almost anywhere in California south of Stockton—these trees are found in practice to yield at the very least, $10 clear profit per tree, or $600 per acre. This is a very low statement, far below the present actual yield of orange orchards in Los Angeles and San Bernardino. I know an orange orchard of nine acres, near Los Angeles, which has brought its owner $8,000 per annum, clear profit, for several years past. One man's labor serves to keep in perfect order twenty acres of any of these fruits. But it should not be forgotten that all these fruits are the better for irrigation. They grow better and faster, and bear more regularly and freely; and the orange and lemon, particularly, will, I am persuaded, bear but poorly without water, though some people deny this. The most skillful orchardists in Southern California now irrigate once in six weeks, and, of course, plow after every irrigation. I have no doubt that the frequent plowing is a great help to the trees. There are people in California who imagine and assert that the ground ought not to be plowed or otherwise disturbed in this State during the dry season, but such men do not succeed in farming there or elsewhere.

DESIGN FOR PRETTY COUNTRY COTTAGE.



Plan for First Floor.